WHAT IS CLAIMED IS:

1. An upper electrode for supplying process gas onto a wafer in semiconductor device manufacturing equipment, comprising:

a plate electrode, and a plurality of nozzles integral with said plate electrode so as to inject process gas supplied at one side of the plate electrode into a processing chamber from the other side of the plate electrode, said nozzles being configured to inject the process gas at a flow rate that is higher overall at a peripheral portion of said plate electrode than at a central portion of said plate electrode located radially inwardly of the peripheral portion.

2. The electrode as claimed in 1, wherein said plurality of nozzles are identical with respect to their configurations such that said nozzles will inject the process gas at equal flow rates, and the nozzles are disposed more densely at the outer peripheral portion of the plate electrode than at the central portion of the plate electrode.

3. The electrode as claimed in 1, wherein said plurality of nozzles include nozzles at the outer peripheral portion of the plate electrode, and a nozzle at the central portion of the plate electrode, and the nozzles at the outer peripheral portion of the plate electrode have configurations that are different from the nozzle at the central portion of the plate electrode, each of said nozzles at the outer peripheral portion of the plate electrode being configured to inject the process gas at a higher

flow rate than the nozzle at the central portion of the plate electrode.

4. The electrode as claimed in 3, wherein said nozzles at the peripheral portion of the electrode plate are arrayed in at least one concentric group centered about the nozzle at the central portion of the plate electrode, and the nozzles within each said group have the same configurations so as to inject the process gas at the same flow rate.

5. The electrode as claimed in 3, wherein said nozzles at the peripheral portion of the electrode plate have through-holes that are larger than those of the nozzle at the central portion of the plate electrode.

6. The apparatus as claimed in 3, wherein each of said nozzles at the peripheral portion of the electrode plate has a number of through-holes greater than the number of the through holes of the nozzle at the central portion of the plate electrode.

7. A method of supplying process gas onto the surface of a wafer in semiconductor device manufacturing equipment having a processing chamber in which the wafer is supported, and a radio frequency power source for exciting the process gas, said method comprising:

supplying process gas to the chamber;

injecting the supplied process gas at a flow rate of 0~15 weight percent per

unit time, of the total amount of the process gas being supplied, onto a central portion of an upper surface of the wafer from a central location directly above the center of the wafer; and

injecting the remainder of the supplied process gas onto a peripheral portion of the upper surface of the wafer from at least three peripheral locations disposed above the wafer and at equal intervals from each other along a circle whose center coincides with said central location, and at flow rates greater at each of said peripheral locations than the flow rate at which the gas is injected from said central location.

8. The method as claimed in 7, wherein said peripheral locations are located vertically opposite the outer peripheral edge of the wafer.

9. Semiconductor manufacturing equipment, comprising:

a processing chamber;

a supply line through which process gas is supplied to said chamber;

a central nozzle disposed at an upper part of said chamber;

a plurality of edge nozzles disposed at the upper part of said chamber at peripheral locations, respectively, disposed at equal intervals from each other along a circle whose center coincides with said central nozzle;

a controllable distributor operatively interposed between said supply line and said nozzles so as to control the flow of the process gas from the supply line to the

nozzles;

an exhaust system connected to said processing chamber to create a vacuum within the chamber;

a pressure sensor that measures the pressure in the chamber interior;

a database that stores information regarding the processing of a wafer within said chamber; and

a controller operatively connected to said database so as to receive the information stored by the database, operatively connected to said pressure sensor and said exhaust system so as to control the exhaust system to regulate the pressure with the chamber on the basis of the pressure sensed by said sensor, and operatively connected to said distributor for controlling the distributor to regulate the flow of the process gas to said nozzles.

10. The equipment as claimed in 9, wherein the distributor comprises:

pipes diverging from the supply line and each connected to a respective one of the central nozzle and the edge nozzles; and

a control valve disposed in-line with the divergent pipes, and operatively connected to said controller.

11. The equipment as claimed in 9, wherein the distributor comprises:

a support plate disposed above said nozzles;

and control members supported by said support plate so as to be movable in a direction towards and away from said nozzles; and

an elevating mechanism operatively connected to said control members so as to position said control members relative to said valves, said elevating mechanism being operatively connected to said controller.

12. The equipment as claimed in 11, and further comprising a plate electrode with which said nozzles are integrated, said having a plurality of grooves extending from an upper surface thereof to each of said nozzles, respectively, and wherein each of said control members has a lower end having a shape corresponding to the shape of a respective one of said grooves and is disposed opposite thereto, whereby the control members can be seated in said grooves.

13. The equipment as claimed in 9, and further comprising a plate electrode with which said nozzles are integrated,

and wherein the distributor comprises:

an adjustable control plate disposed on said plate electrode so as to be rotatable in a circumferential direction of said plate electrode, and having through-holes each corresponding to a respective one of said nozzles; and

a rotary drive mechanism supported by the electrode plate and operatively connected to said control plate so as to position the control plate in the circumferential direction relative to said plate electrode.

14. A method of processing a wafer using process gas, comprising,

disposing the wafer in a processing chamber;

collecting the information regarding the processing of the wafer;

determining process conditions to be created in the processing chamber based on the information;

forming a process atmosphere in the chamber on the basis of the determined process conditions;

supplying process gas to the chamber;

applying a radio frequency power to the chamber to excite the process gas;

injecting the supplied process gas onto a central portion of an upper surface of the wafer from a central location directly above the center of the wafer, and

simultaneously injecting the remainder of the supplied process gas onto a peripheral portion of the upper surface of the wafer from peripheral locations disposed above the wafer and at equal intervals from each other along a circle whose center coincides with said central location; and

controlling the flow rate of the process gas injected onto the upper surface of the wafer from said central and peripheral locations on the basis of the process atmosphere formed in the chamber.

15. The method as claimed in 14, wherein the flow rate of the process gas is controlled also on the basis of the level of radio frequency power applied.